

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Inventor:	Jun HIRANO, et al.	Art Unit: 2477
Appln. No.:	10/593,707	Exr. Y. Zhou
Filed:	July 13, 2007	Conf. No. 3097
For:	DYNAMIC NETWORK MANAGEMENT SYSTEM, DYNAMIC NETWORK MANAGEMENT DEVICE, AND DYNAMIC NETWORK MANAGEMENT METHOD	

AMENDMENT UNDER 37 C.F.R. § 1.116 AND  
SUMMARY OF SUBSTANCE OF TELEPHONE INTERVIEW

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated August 16, 2011 and in accordance with the telephone interview conducted on November 4, 2011, the following amendments and remarks along with a summary of the substance of the telephone interview and a Request for Continued Examination (RCE) are respectfully submitted:

## IN THE CLAIMS

Please amend the claims to read as follows:

### Listing of Claims

1. (Currently Amended) A dynamic network management system in a communication system including a mobile access router forming a mobile network, a local fixed router forming a local network and residing in the mobile network, and a mobile node participating in the local network,

wherein the dynamic network management system is configured so that, after the mobile node sends first information as a part of second information which reaches a network entity outside of the local network, the first information comprising special markings requesting a global address of the mobile access router as part of an Access Router Option (ARO) solution, the mobile access router receiving the first information from the mobile node through the local fixed router informs the mobile node about the global address of the mobile access router.

2-3. (Cancelled)

4. (Currently Amended) A dynamic network management apparatus placed in a mobile access router which forms a mobile network, comprising:

a connection unit for connecting to a local fixed router forming a local network and residing in the mobile network,

an information detection unit for detecting first information comprising special markings requesting a global address of the mobile access router as part of an Access Router Option (ARO) solution, the first information being a part of second information which reaches a

an information detection unit for detecting first information comprising special markings requesting a global address of the mobile access router as part of an Access Router Option (ARO) solution, the first information being a part of second information which reaches a network entity outside of the local network, the second information being sent from a mobile node participating in the local network, and the second information being forwarded by the local fixed router to the mobile access router, and

a response information sending unit for sending response information including the global address of the mobile access router to the mobile node which has sent the first information through the local fixed router in order to inform the mobile node of the global address of the mobile access router when the first information is detected by the information detection unit.

5. (Cancelled)

6. (Previously Presented) The dynamic network management apparatus according to claim 4, further comprising:

an information deleting unit for deleting the first information from a packet with the first information when the first information is detected by the information detection unit, and

a forwarding unit for forwarding the packet from which the first information has been deleted by the information deleting unit to a predetermined destination set in the packet.

7. (Previously Presented) The dynamic network management apparatus according to claim 4, further comprising a forwarding unit for forwarding a packet with the first information

to a predetermined destination set in the packet.

8. (Previously Presented) The dynamic network management apparatus according to claim 4, further comprising a dropping unit for dropping a packet with the first information.

9. (Currently Amended) A dynamic network management apparatus placed in a mobile node which participates in a local network formed by a local fixed router residing in a mobile network, the mobile network being formed by a mobile access router, comprising:

a connection unit for connecting to a certain router residing in the local network,  
a sending unit for sending first information as a part of second information which reaches a network entity outside of the local network, the first information comprising special markings requesting a global address of the mobile access router as part of an Access Router Option (ARO) solution when the mobile node does not know the global address of the mobile access router, wherein the second information is to be forwarded by the certain router connected to the mobile access router, and

a response information receiving unit for receiving response information including the global address of the mobile access router to be sent from the mobile access router as a response to the first information which is a part of the second information sent by the sending unit.

10. (Cancelled)

11. (Previously Presented) The dynamic network management apparatus according to

claim 9, further comprising an information embedding unit for embedding the first information in a packet header of a Binding Update message, the Binding Update message being addressed to a predetermined communication apparatus which is different from the mobile access router, and configured so that the sending unit sends a packet including the Binding Update message in which the first information is embedded by the information embedding unit.

12. (Previously Presented) The dynamic network management apparatus according to claim 9, wherein the dynamic network management apparatus is configured so that the sending unit sends information indicating that an access router option can be used in parallel with sending the first information.

13. (Previously Presented) The dynamic network management apparatus according to claim 9, further comprising a packet creating unit for creating a special packet representing the first information, and being configured so that the sending unit sends the special packet created by the packet creating unit.

14-18. (Cancelled)

19. (Currently Amended) A dynamic network management method used by a mobile access router which forms a mobile network and which connects to a local fixed router forming a local network and residing in the mobile network, comprising:

an information detection step of detecting first information comprising special markings requesting a global address of the mobile access router as part of an Access Router Option (ARO) solution, the first information being a part of second information which reaches a network entity outside of the local network, the second information being sent from a mobile node participating in the local network, and the second information being forwarded by the local fixed router to the mobile access router, and

a response information sending step of sending response information including the global address of the mobile access router to the mobile node which sent the second information through the local fixed router in order to inform the mobile node of the global address of the mobile access router when the first information is detected at the information detection step.

20. (Cancelled)

21. (Previously Presented) The dynamic network management method according to claim 19, further comprising:

an information deleting step of deleting the first information from a packet with the first information when the first information is detected at the information detection step, and

a forwarding step of forwarding the packet in which the first information has been deleted at the information deleting step to a predetermined destination set in the packet.

22. (Previously Presented) The dynamic network management method according to claim 19, further comprising a forwarding step of forwarding a packet with the first information to a

predetermined destination set in the packet.

23. (Previously Presented) The dynamic network management method according to claim 19, further comprising a dropping step of dropping a packet with the first information.

24. (Currently Amended) A dynamic network management method used by a mobile node which participates in a local network formed by a local fixed router residing in a mobile network, the mobile network being formed by a mobile access router, the mobile node connecting to a certain router residing in the local network, the method comprising:

a sending step of sending first information as a part of second information which reaches a network entity outside of the local network, the first information comprising special markings requesting a global address of the mobile access router as part of an Access Router Option (ARO) solution when the mobile node does not know the global address of the mobile access router, wherein the second information is to be forwarded by the certain router to the mobile access router; and

a response information receiving step of receiving response information including the global address of the mobile access router sent from the mobile access router as a response to the first information included in the second information sent at the sending step.

25. (Cancelled)

26. (Previously Presented) The dynamic network management method according to claim

24, further comprising an information embedding step of embedding the first information in a packet header of a Binding Update message, the Binding Update message being addressed to a predetermined communication apparatus which is different from the mobile access router, wherein a packet including the Binding Update message in which the first information is embedded at the information embedding step is sent at the sending step.

27. (Previously Presented) The dynamic network management method according to claim 24, wherein information is sent indicating that an access router option can be used in parallel with sending the first information at the sending step.

28. (Previously Presented) The dynamic network management method according to claim 24, further comprising a packet creating step of creating a special packet representing the first information, wherein the special packet created at the packet creating step is sent at the sending step.

29-45. (Cancelled)

46. (Currently Amended) The dynamic network management system according to claim 1, wherein the mobile access router looks for the first information comprising the special markings requesting the global address of the mobile access router by scanning a packet, the packet being sent from a certain node participating in the mobile network, and the packet being



addressed to a predetermined communication apparatus which is different from the mobile access router.

47. (Cancelled)

48. (Currently Amended) The dynamic network management apparatus according to claim 4, wherein the information detection unit comprises a packet scanning unit for scanning a packet, the packet being sent from a certain node participating in the mobile network, and the packet being addressed to a predetermined communication apparatus which is different from the mobile access router, and wherein the information detection unit detects the first information comprising the special markings requesting the global address of the mobile access router by scanning the packet.

49. (Cancelled)

50. (Currently Amended) The dynamic network management method according to claim 19, wherein the information detection step comprises a packet scanning step of scanning a packet, the packet being sent from a certain node participating in the mobile network, and the packet being addressed to a predetermined communication apparatus which is different from the mobile access router, and wherein the first information comprising the special markings requesting the global address of the mobile access router is detected by scanning the packet at the information detection step.

51. (Cancelled)

## REMARKS

Reconsideration and allowance of the application are respectfully requested in light of the above amendments and the following remarks.

At the outset, the Applicants wish to thank the Examiner for the courtesy shown to their attorney during a telephone interview on November 4, 2011. The participants were Examiner Zhou and the Applicants' representative, Douglas Agopsowicz, Reg. No. 56,792. The following includes a summary of the substance of the interview.

During the interview, the Examiner agreed that the amendments to the independent claims contained herein would likely overcome the current rejections and might place the application in condition for allowance, subject to further search and consideration.

Accordingly, independent claims 1, 4, 9, 19, and 24 have been amended to recite that the first information comprises "special markings" requesting a global address of the mobile access router "as part of an Access Router Option (ARO) solution," as agreed upon during the interview to likely overcome the current rejections, and dependent claims 46, 48 and 50 have been amended to be consistent with the amendments to independent claims 1, 4, and 19, respectively. Support for the amendments is provided, for example, in paragraphs [0030] and [0057]-[0070] of the published U.S. application. Neither Venkitaraman et al. (US 2003/0161287) nor Janneteau et al. (US 7,430,174), whether considered individually or in combination, teach or suggest the above-noted features recited by amended independent claims 1, 4, 9, 19, and 24.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James E. Ledbetter/

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JEL/DEA/att  
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